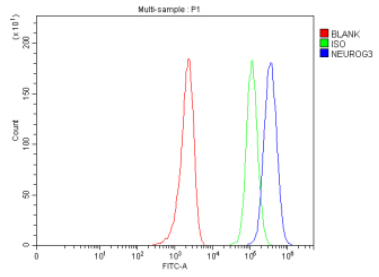
NEUROG3 Antibody / Neurogenin 3 (FY12049)

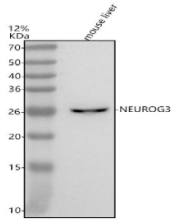
Catalog No.	Formulation	Size
FY12049	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

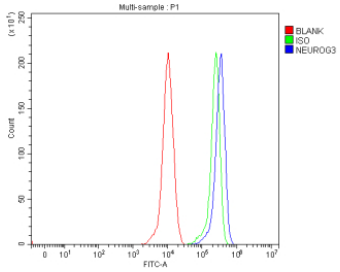
Availability	1-2 days
Species Reactivity	Human, Mouse
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9Y4Z2
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This NEUROG3 antibody is available for research use only.



Flow Cytometry analysis of MCF-7 cells using anti-NEUROG3 antibody. Overlay histogram showing MCF-7 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NEUROG3 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of NEUROG3 using anti-NEUROG3 antibody. Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: mouse liver tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NEUROG3 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. The expected band size for NEUROG3 is at 23 kDa, commonly observed at 23-27 kDa.



Flow Cytometry analysis of THP-1 cells using anti-NEUROG3 antibody. Overlay histogram showing THP-1 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NEUROG3 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

NEUROG3 antibody detects Neurogenin-3, encoded by the NEUROG3 gene. Neurogenin-3 is a basic helix-loop-helix transcription factor that plays a central role in the development of endocrine cells in the pancreas and intestine. NEUROG3 antibody provides researchers with a highly specific reagent for studying pancreatic development, endocrine lineage specification, and diabetes biology.

Neurogenin-3 regulates transcriptional networks that guide progenitor cells toward endocrine fates. Research using NEUROG3 antibody has shown that it activates genes required for insulin, glucagon, somatostatin, and pancreatic polypeptide production. In the intestine, it directs progenitors to form enteroendocrine cells, which secrete hormones critical for digestion and energy homeostasis. These findings emphasize its role as a master regulator of endocrine differentiation.

Studies with NEUROG3 antibody have revealed that mutations in NEUROG3 cause neonatal diabetes and congenital malabsorptive diarrhea. These conditions reflect failure of endocrine cell differentiation, leading to severe metabolic and gastrointestinal dysfunction. This demonstrates that Neurogenin-3 is indispensable for human development.

Beyond congenital disorders, research using NEUROG3 antibody has highlighted its role in regenerative biology. Activation of Neurogenin-3 in adult progenitors can stimulate endocrine differentiation, suggesting therapeutic strategies for diabetes through beta-cell regeneration. These findings expand the relevance of NEUROG3 from development to regenerative medicine.

NEUROG3 is also implicated in cancer. Abnormal expression has been detected in gastrointestinal tumors, where it may influence tumor differentiation. Research using NEUROG3 antibody continues to explore how developmental transcription factors become repurposed in oncogenesis.

NEUROG3 antibody is widely used in immunohistochemistry, western blotting, and immunofluorescence. Immunohistochemistry highlights endocrine progenitors in pancreatic tissue, western blotting quantifies protein levels in development and disease, and immunofluorescence demonstrates nuclear localization. These applications make NEUROG3 antibody indispensable in developmental biology and disease research.

By supplying validated NEUROG3 antibody reagents, NSJ Bioreagents supports studies into pancreatic and intestinal

biology, diabetes, and cancer. Detection of Neurogenin-3 provides researchers with insight into how transcription factors regulate lineage specification and disease.

Application Notes

Optimal dilution of the NEUROG3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NEUROG3 recombinant protein (Position: Q137-L214) was used as the immunogen for the NEUROG3 antibody.

Storage

After reconstitution, the NEUROG3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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